

AMENDMENTS TO THE CLAIMS

A detailed listing of all claims that are, or were, in the present application, irrespective of whether the claim(s) remains under examination in the application are presented below. The claims are presented in ascending order and each includes one status identifier.

1. - 19. (Cancelled)

20. (Currently Amended) A medical device comprising a surface capillary fiber comprising a polymer and a quantity of bioactive agent associated with the surface capillary fiber wherein the bioactive agent elutes in a controlled way from the fiber when the surface capillary fiber is contacting a patient's body fluids/tissue, wherein the surface capillary fiber has a channel along its outer surface that extends substantially parallel to the length of the surface capillary fiber, the channel extending along at least a portion of the length of the surface capillary fiber.

21. (Original) The medical device of claim 20 wherein the bioactive agent is selected from a group consisting of an anti-microbial agent, a thrombolytic agent, an anti-platelet agent, an anti-coagulation agent, a growth factor or a combination thereof.

22. (Original) The medical device of claim 20 wherein the bioactive agent comprises a thrombolytic agent.

23. (Previously Presented) The medical device of claim 20 wherein the bioactive agent comprises tissue plasminogen activator.

24. (Original) The medical article of claim 20 wherein the bioactive agent comprises an anti-microbial agent.

25. (Previously Presented) The medical device of claim 20 wherein the surface capillary fiber has a surface area of at least about a factor of 1.5 greater than a corresponding circular fiber with an equivalent diameter.
26. (Original) The medical device of claim 20 wherein the device is configured for placement within a blood vessel without blocking flow through the vessel.
27. (Currently Amended) The medical device of claim 20 wherein the device comprises a catheter and additional surface capillary fibers, wherein the surface capillary fibers are associated with the inner surface of the catheter.
28. (Currently Amended) A tubular medical device comprising a tubular substrate having an interior surface and an exterior surface and ~~at least one~~ a plurality of surface capillary fibers associated with at least a portion of one of the surfaces with an adhesive or chemical bonding.
29. (Original) The tubular medical device of claim 28 wherein the device comprises a catheter configured for placement within a vessel of a patient.
30. (Original) The tubular medical device of claim 29 wherein the catheter is a microcatheter.
31. (Previously Presented) The tubular medical device of claim 28 wherein the surface capillary fibers are associated with a bioactive agent.
32. (Original) The tubular medical device of claim 31 wherein the bioactive agent comprises heparin sulfate.
33. (Currently Amended) The tubular medical device of claim 28 wherein ~~[[the]]~~ at least one of the surface capillary ~~capillary~~ fibers is associated with at least a portion of the inner surface.

34. (Currently Amended) A medical device comprising a non-porous surface at least a portion of which is covered with surface capillary fibers wherein the surface is contoured to match a portion of a structure within a patient.

35. (Original) The medical device of claim 34 wherein the non-porous surface comprises a polymer.

36. (Cancelled)

37. (Previously Presented) The medical device of claim 34 wherein the surface capillary fibers are associated with a bioactive agent.

38. - 46. (Cancelled)

47. (Currently Amended) A method for delivering a bioactive agent, the method comprising contacting a patient's body fluids/tissues with a surface capillary fiber associated with the bioactive agent wherein the bioactive agent elutes in a controlled way from the fiber, wherein the surface capillary fiber has a channel along its outer surface that extends substantially parallel to the length of the surface capillary fiber, the channel extending along at least a portion of the length of the surface capillary fiber.

48. (Withdrawn) The method of claim 47 wherein contacting of the patient's fluids/tissue comprises implanting a prosthetic device comprising the surface capillary fiber.

49. (Withdrawn, Currently Amended) The method of claim 47 wherein contacting of the patient's fluids/tissue comprises delivery of a catheter associated with the surface capillary fiber ~~through a catheter.~~

50. (Withdrawn) The method of claim 49 wherein the surface capillary fiber is associated with the interior lumen of the catheter.

51. (Withdrawn) The method of claim 49 wherein the surface capillary fiber is associated with a medical device that is delivered through the catheter.

52. (Original) The method of claim 47 wherein the bioactive agent is selected from the group consisting of a thrombolytic agent, an anti-platelet agent, an anti-coagulation agent, a growth factor or a combination thereof.

Please add the following new claim.

53. (New) The medical device of claim 20 wherein the bioactive agent is associated with a controlled release agent.